



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/306,813	05/07/1999	YOSHINORI KUNO	P99.0372	3991
33448	7590	10/20/2005		
ROBERT J. DEPKE LEWIS T. STEADMAN Trexler, Bushnell, Glanlorgi, Blackstone & Marr 105 West Adams Street, Suite 3600 Chicago, IL 60603-6299			EXAMINER MISLEH, JUSTIN P	
			ART UNIT	PAPER NUMBER
			2612	

DATE MAILED: 10/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/306,813

Applicant(s)

KUNO ET AL.

Examiner

Justin P. Misleh

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed July 15, 2005 have been fully considered but they are not persuasive.
2. With regards to amended Claims 1 and 5, the following is newly added claim language, “a first switch connected to selectively apply a first pulse signal or a floating level to a first input of the transfer register; and a second switch connected to selectively apply a second pulse signal or a fixed voltage level to a second input of the transfer register.”
3. The newly added claim language is written broadly enough such that the *first switch is NOT required to select one from a group consisting of either a first pulse signal or a floating level* and the *second switch is NOT required to select one from a group consisting of between either a second pulse signal or a fixed voltage level*. Rather, the newly added claim language requires a first switch that decides which specific instant to apply (i.e. selectively applies) either a first pulse signal or a floating level and a *second switch that decides which specific instant to apply (i.e. selectively applies) a second pulse signal or a fixed voltage level*.
4. Furthermore, with regard to amended Claim 6, the following is newly amended claim language, “switching circuitry selectively connects one of an output from the timing pulse generator, a fixed voltage level and a floating level to an input of the signal transfer device.”
5. Again, the newly amended claim language is written broadly enough such that the *switching circuitry is NOT required to select one from a group consisting of either a fixed voltage level or a floating level*. Rather, the newly amended claim language requires a switching

Art Unit: 2612

circuitry that decides which specific instant to apply (i.e. selectively connects) either a fixed voltage level or a floating level.

6. Nonetheless, the prior art Endo et al. disclose the newly required claim language of Claims 1, 5, and 6. For instance, Endo et al. disclose in figure 5, a timing pulse generator 152 for producing pulse signals P8 and P7 and switching circuits 166 and 164 for deciding the specific instants to apply (i.e. selectively apply) the pulse signals P8 and P7, respectively. The supporting timing diagram of figures 6A and 6B clearly show that the pulse signals V4 and V3 (representing pulse signals P8 and P7) are selectively applied.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. **Claims 2 – 4** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

9. With regard to newly amended Claim 2, the last paragraph recites, “in a second mode, selectively replacing at least one of the first through fourth pulse signals with a floating level and wherein another driving pulse is applied to the input at which the pulse signal is replaced with floating level, the driving pulse being replaced.” Likewise, newly amended Claim 3 recites therein, “another driving pulse is applied to the input at which the driving pulse is replaced with

Art Unit: 2612

the floating level.” In other words, Claims 2 and 3 as amended require that in a second mode two separate driving pulses be applied to the same input of the charge transfer portion wherein at least one of the two driving pulses is replaced with a floating level. The requirement of Claims 2 and 3 were not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. At best, the specification (as described with respect to figures 1 and 4) reasonably conveys wherein a first pulse signal for driving said charge transfer portion and a second pulse signal for reading out charges in said photoelectric converter portion or also driving said charge transfer portion and selectively replacing at least one of the first pulse signal or second pulse signal with a floating level.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. **Claims 1, 5, and 6** are rejected under 35 U.S.C. 102(b) as being anticipated by Endo et al.

12. For **Claim 1**, Endo et al. disclose, as shown in figure 2, 5, and 7, a solid state image pickup device (10) being provided with a photoelectric converter portion (PD) having a plurality of pixels disposed in a row, a charge transfer portion (VT) for transferring the charges generated

Art Unit: 2612

in said photoelectric converter portion (PD) and a charge/voltage converter portion (OA) for converting the charges transferred by said charge transfer portion into voltages comprising:

a transfer register (VT);

a first switch connected to selectively apply a first pulse signal or a floating level to a first input of the transfer register (see explanation below); and

a second switch connected to selectively apply a second pulse signal or a fixed voltage level to a second input of the transfer register (see explanation below).

The newly added claim language is written broadly enough such that the *first switch is NOT required to select one from a group consisting of either a first pulse signal or a floating level* and the *second switch is NOT required to select one from a group consisting of between either a second pulse signal or a fixed voltage level*. Rather, the newly added claim language requires *a first switch that decides which specific instant to apply (i.e. selectively applies) either a first pulse signal or a floating level and a second switch that decides which specific instant to apply (i.e. selectively applies) a second pulse signal or a fixed voltage level*.

However, the prior art Endo et al. disclose the newly required claim language. For instance, Endo et al. disclose in figure 5, a timing pulse generator 152 for producing pulse signals P8 and P7 and switching circuits 166 and 164 for deciding the specific instants to apply (i.e. selectively apply) the pulse signals P8 and P7, respectively. The supporting timing diagram of figures 6A and 6B clearly show that the pulse signals V4 and V3 (representing pulse signals P8 and P7) are selectively applied.

13. For **Claim 5**, Endo et al. disclose, Endo et al. disclose, as shown in figure 2, 5, and 7, a solid state image pickup device (10) being provided with a photoelectric converter portion (PD)

Art Unit: 2612

having a plurality of pixels disposed in a row, a charge transfer portion (VT) for transferring the charges generated in said photoelectric converter portion (PD) and a charge/voltage converter portion (OA) for converting the charges transferred by said charge transfer portion into voltages, further comprises:

- a transfer register (VT);

- a first switch connected to selectively apply a first pulse signal or a floating level to a first input of the transfer register (see explanation below); and

- a second switch connected to selectively apply a second pulse signal or a fixed voltage level to a second input of the transfer register (see explanation below).

The newly added claim language is written broadly enough such that the *first switch is NOT required to select one from a group consisting of either a first pulse signal or a floating level* and the *second switch is NOT required to select one from a group consisting of between either a second pulse signal or a fixed voltage level*. Rather, the newly added claim language requires a first switch that decides which specific instant to apply (i.e. selectively applies) either a first pulse signal or a floating level and a second switch that decides which specific instant to apply (i.e. selectively applies) a second pulse signal or a fixed voltage level.

However, the prior art Endo et al. disclose the newly required claim language. For instance, Endo et al. disclose in figure 5, a timing pulse generator 152 for producing pulse signals P8 and P7 and switching circuits 166 and 164 for deciding the specific instants to apply (i.e. selectively apply) the pulse signals P8 and P7, respectively. The supporting timing diagram of figures 6A and 6B clearly show that the pulse signals V4 and V3 (representing pulse signals P8 and P7) are selectively applied.

Art Unit: 2612

14. For **Claim 6**, Endo et al. disclose, as shown in figures 2, 5, 6, and 7, a solid-state image pick-up device comprising:

a timing pulse generator (152/74);

a signal transfer device (10) and switching circuitry (including switching circuits 160, 162, 164, and 166) connected between the timing pulse generator (152/74) and the signal transfer device (10) wherein the switching circuitry selectively connects one of an output (V1 – V4) from the timing pulse generator, a fixed voltage potential (V_C and V_D) and a floating level (Pe and Pf) to an input of the signal transfer device (see explanation below).

The newly amended claim language is written broadly enough such that the *switching circuitry is NOT required to select one from a group consisting of either a fixed voltage level or a floating level*. Rather, the newly amended claim language requires a *switching circuitry that decides which specific instant to apply (i.e. selectively connects) either a fixed voltage level or a floating level*.

However, the prior art Endo et al. disclose the newly required claim language. For instance, Endo et al. disclose in figure 5, a timing pulse generator 152 for producing pulse signals P8 and P7 and switching circuits 166 and 164 for deciding the specific instants to apply (i.e. selectively apply) the pulse signals P8 and P7, respectively. The supporting timing diagram of figures 6A and 6B clearly show that the pulse signals V4 and V3 (representing pulse signals P8 and P7) are selectively applied.

Conclusion

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

16. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Justin P Misleh whose telephone number is 571.272.7313. The Examiner can normally be reached on Monday through Friday from 8:00 AM to 5:00 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Ngoc Yen Vu can be reached on 571.272.7320. The fax phone number for the organization where this application or proceeding is assigned is 571.273.3000.

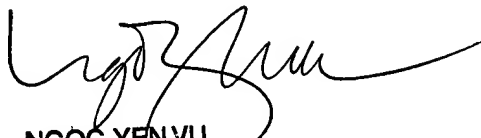
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 2612

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JPM

October 15, 2005



NGOC-YEN VU
PRIMARY EXAMINER